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Article type : Letter to the Editor

The Swiss approach to the COVID-19 outbreak

To the Editor:

Angelico et al. described the impact of the novel coronavirus (COVID-19) outbreak on organ transplantation in Italy (1), where only one center in Milan has limited transplant activity to most urgent cases. The rest of the country continued with the regular allocation policy (1). In Switzerland, which has more COVID-19 cases per capita than Italy (2), we have opted for a stepwise approach (3):

- 1) Stop live donor transplantations;
- 2) Stop pancreas and islet transplants;
- 3) Stop deceased donor kidney transplants;
- 4) A tailored approach to urgent status transplants;
- 5) Only urgent transplants to be performed;
- 6) Stop all transplants.

In Geneva, a regional hotspot (2), we halted all transplantation activity, except for urgent cases (level 5). Less affected centers have continued their activity at level 4 (Table 1). Overall, the number of transplanted organs in March has decreased to 26 (-38% compared to the monthly average of 2019). Our projections indicate a 26% decrease of the transplantation activity in 2020 (estimated 368 vs. 501 organs in 2019). Between February and March 2020, the decrease in transplantations already led to an increase in median waiting time of 21.2% and 40.2% for kidney and liver transplant candidates, respectively (4).

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the [Version of Record](#). Please cite this article as [doi: 10.1111/AJT.15939](https://doi.org/10.1111/AJT.15939)

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This development is concerning on two levels. Firstly, the increase in waiting time will likely increase the waitlist mortality after the pandemic. This raises the question whether it is ethical to trade-off immediate COVID-19-related mortality for a projected increase in waitlist mortality. Jeopardizing the survival of patients on the waiting list cannot be an acceptable long-term option but might be inevitable in the short-term. In extreme situations, requiring triage of resources, delaying access to a life-saving organ is also a triage decision. However, a staged resumption of transplantation activity, once the pandemic has reached a plateau, is essential. Secondly, in a setting where transplantation activity is significantly reduced, patients with a Model End Stage Liver Disease (MELD) exception will inevitably gain points merely by waiting. It is crucial to avoid putting patients with a true laboratory MELD at a disadvantage in the post-COVID-19 period.

Regarding testing, we disagree that it should be limited to areas affected by COVID-19 (5). The past few weeks have shown how dynamic the epidemiological situation is. We cannot take risks and expose transplanted patients to an unknown hazard. In the current setting, we would prefer to transplant patients who already developed an immunity against SARS CoV2, as they are likely protected against COVID-19 in the short term. We therefore advocate for serological testing of waitlisted patients and wide molecular testing of all patients immediately before transplantation. However, one also needs to consider the limitations of serological testing, of which the specificity (cross-reactivity with other coronaviruses) and sensitivity still have to be determined.

Overall, we suggest the decision to halt transplantation activity must be integrated in a global public health perspective and taken only when absolutely necessary. Furthermore, we advocate for broad testing of donors and recipients, even in regions that are not COVID-19 hotspots.

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Disclosure

The authors of this manuscript have no conflicts of interest to disclose as described by the *American Journal of Transplantation*.

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Table

Table 1. Impact of the COVID-19 pandemic on liver transplantation activity in Switzerland

	Change of transplantation activity in March 2020*	COVID Infection rate (1, 2) ⁺	Patients in ICU care (2) ⁺⁺
Geneva	-100%	8,441	94.19
Zurich	-6%	1,905	32.83
Bern	-50%	1,290	31.88
Italy	-25%	2,307	66.16

*Compared to the average monthly number of liver transplantations in 2019, ⁺Confirmed cases/million inhabitants, ⁺⁺Patients treated in ICU/million inhabitants